Historic, archived document

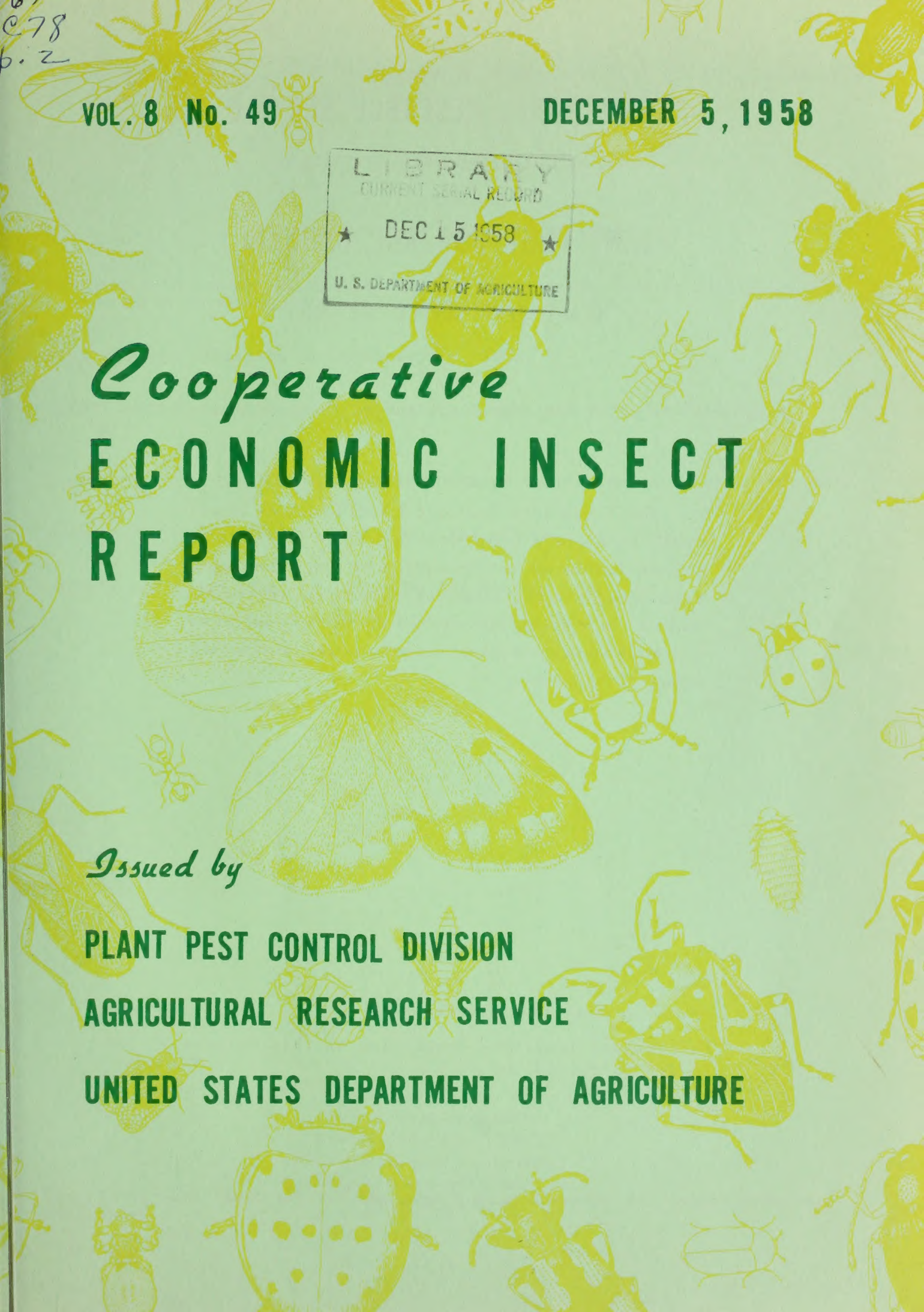
Do not assume content reflects current scientific knowledge, policies, or practices.

C78
b.2

VOL. 8 No. 49

DECEMBER 5, 1958

LIBRARY
CURRENT SERIAL RECORD
★ DEC 15 1958 ★
U. S. DEPARTMENT OF AGRICULTURE



Cooperative ECONOMIC INSECT REPORT

Issued by

PLANT PEST CONTROL DIVISION
AGRICULTURAL RESEARCH SERVICE
UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL DIVISION

PLANT PEST SURVEY SECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearing house and does not assume responsibility for accuracy of the material.

Reports and inquiries pertaining to this release should be mailed to:

Plant Pest Survey Section
Plant Pest Control Division
Agricultural Research Service
United States Department of Agriculture
Washington 25, D. C.

Volume 8 December 5, 1958 Number 49

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

GREENBUG more common and heavier on oats in Arkansas than in most years and scattered in northwestern Oklahoma counties. (p. 979).

PINK BOLLWORM situation in Arizona. (p. 980).

CARPET BEETLES more abundant in western Oregon and parts of California. (p. 982).

Distribution of CALIFORNIA FLATHEAD BORER in western North America. (p. 981).

Summary of INSECT CONDITIONS - 1958 - NEW MEXICO. (p. 984).

INSECTS not known to occur in the United States. (p. 989).

****

Reports in this issue are for the week ending November 28, unless otherwise designated.

WEATHER BUREAU 30-DAY OUTLOOK

DECEMBER 1958

The Weather Bureau's 30-day outlook for December calls for temperatures to average below seasonal normals over the northern half of the nation from the Continental Divide eastward to the Atlantic Seaboard. Above normal temperatures are indicated for the California Coast and Florida. In other areas about normal temperatures for the season are in prospect. Precipitation is expected to exceed normal along the Gulf and Atlantic Coasts, over the Northern Plains and along the West Coast. Over the northern half of the nation much of the precipitation will be in the form of snow. Subnormal amounts are expected in the Southern Plateau, the southern Rocky Mountain States and the Central Plains. Otherwise near normal precipitation is indicated.

Weather forecast given here is based on the official 30-day "Resume and Outlook", published twice a month by the Weather Bureau. You can subscribe through Superintendent of Documents, Washington 25, D.C. Price $4.80 a year, $2.40 a half year.

WEATHER OF THE WEEK ENDING DECEMBER 1

Another winter storm brought unusually cold weather to the northern half of the Nation. Subzero temperatures equaled or exceeded record November lows in Indiana and Ohio and fell to near record levels in most of the Great Lakes region, while subfreezing extended to some sections of the Gulf Coast. In contrast, near to record-breaking warm temperatures prevailed in the Middle and South Atlantic Coastal States during the early part of the week. Light to heavy snows also were part of the cold regime in northern areas east of the Rockies. Precipitation totals for last week were mostly under 1/2 inch west of the Mississippi, except in the coastal sections of Washington where over 1 inch fell. Unusually dry weather persisted in the Central Valley of California. East of the Mississippi, precipitation totals, generally over 1 inch, totaled over 4 inches in the North Carolina Capes. Sections without measurable precipitation were reported in northern Florida, northern Nebraska, southern North Dakota, northwestern Iowa, most of the Great Basin, California and southwestern Arizona.

Temperature averages rose from below normal the previous week to above normal in the Southwest, remained about 6° above normal in Florida and generally were lower and well below normal elsewhere. In the Ohio Valley and North Central Interior, temperatures averaged about 18° lower than for the preceding week. On last Monday, November 24, Baltimore, Maryland, with 72°, broke its 87-year high temperature record for that date; other daily records were broken in Tennessee, Georgia and Florida. The next day, Tampa, Florida, had 87°, a new late-season record. With falling temperatures in most areas during the week, International Falls, Minnesota, recorded a record November low of -27° and Dayton, Ohio, -2°; while the Akron-Canton, Ohio, Airport was the coldest for so early in the season. Monday, as the cold air mass centered over North Dakota moved eastward, it was followed by an area of low pressure from the Pacific Northwest. Strong northerly Arctic winds blew across the northern Great Plains, with peak gusts of 75 m.p.h. in Montana and 100 m.p.h. (estimated) in northwestern Colorado. Tuesday, blizzard conditions charged with bitter cold swept across the Great Plains. Wednesday, the leading edge of the huge, cold air mass from the Yukon swept through the Northeastern States with patches of glaze in New Hampshire. Thursday and Friday, rain from overrunning moist air turned to sleet or glaze in a band from Oklahoma into the New England States, and over two-thirds of Oklahoma was covered with ice. Friday and Saturday, southeasterly gales of 70 m.p.h. produced some damage in Connecticut and Massachusetts. Saturday, the

Weather continued on Page 983

CEREAL AND FORAGE INSECTS

GRASSHOPPERS - ARIZONA - Limited observations showed normal decline of adult populations. NEVADA - Egg survey indicates a buildup of early and late-maturing species. Egg beds in northern Elko County show *Oedaleonotus* enigma and *Aulocara* spp. carrying over without evidence of parasitism. Eggs of *Camnula pellucida* were abundant in valleys of Humboldt and Elko Counties, verifying the indicated adult survey rating so far. NEW MEXICO - Egg surveys in Dona Ana and Luna Counties showed 3 egg pods in 220 square feet sampled at 22 locations. UTAH - Egg surveys completed in Cache, Rich, Carbon, Grand and San Juan Counties and partially completed in Utah and Weber Counties show a slightly lower rating than the adult survey. WYOMING - Very few egg pods were found during survey in Niobrara, Platte, Goshen and Laramie Counties, though some areas of very heavy adult populations were sampled. No predators or parasites were noticed in any of the egg pods collected. (PPC, West. Reg., Oct. Rpt.).

MORMON CRICKET (*Anabrus simplex*) - UTAH - An additional 1,000 acres of rangeland in the Green Lakes area, Daggett County, were found to have a threatening infestation. This acreage is Forest Service Land, approximately 10 miles southeast of Manila. (PPC, West. Reg. Oct. Rpt.).

SOUTHWESTERN CORN BORER (*Zeadiatraea grandiosella*) - KANSAS - Corn plants found 98 percent infested in Stafford and Reno Counties, November 21. (Painter).

RICE WEEVIL (*Sitophilus oryza*) - SOUTH CAROLINA - Much heavier in corn than usual. (Nettles, et al.).

A MEALYBUG (*Trionymus rostellum*) - CALIFORNIA - Medium on *Sorghum halepense* in Courtland area of Yolo County. (Cal. Coop. Rpt.).

SORGHUM MIDGE (*Contarinia sorghicola*) - ARKANSAS - Damage to sorghum has been observed in all sections of the State, being much more severe on late crops. (Ark. Ins. Rpt.).

GREENBUG (*Toxoptera graminum*) - ARKANSAS - Infestations on fall-seeded oats more common and heavier than in most years. Breeding plots at Stuttgart were treated 2 weeks ago. Oat fields in east and northeast areas are generally infested with small numbers. One field in Poinsett County averaged 75 per linear foot with spots in the field discolored. (Ark. Ins. Rpt.). OKLAHOMA - Survey of 80 small grain fields in 17 northwestern counties showed scattered infestations in 13 and none in 4 counties. Populations decreased toward the western portion of the area. Heaviest averaged 27 per linear foot, but was generally 3-7 per linear foot over most of the area. (VanCleave). VIRGINIA - Probably this species, heavy on small grains on the Eastern Shore. (Hofmaster).

APPLE GRAIN APHID (*Rhopalosiphum fitchii*) - OKLAHOMA - Averaged 1-50 per linear foot in small grain fields in northwestern part of State. (VanCleave).

A FLEA BEETLE - TEXAS - Damaged early wheat in Briscoe County. (Ledbetter).

WINTER GRAIN MITE (*Penthaleus major*) - TEXAS - Caused damage to several fields of oats in Falls County. (Hawkins).

A RICE DELPHACID (*Sogata orizicola*) - ARKANSAS - Limited surveys in the State have been negative. (Ark. Ins. Rpt.).

CHINCH BUGS - SOUTH CAROLINA - Troublesome in lawns in Charleston and Richland Counties. (Nettles, et al.).

CORN LEAF APHID (*Rhopalosiphum maidis*) - OKLAHOMA - Ranged 5-300 per linear foot in northwestern barley fields. Very small populations in some wheat fields. (VanCleave).

CLOVER ROOT CURCULIO (Sitona hispidula) - MARYLAND - Adults averaged 3 per 10 sweeps on red clover at Fairland. (U. Md., Ent. Dept.).

CLOVER SEED CHALCID (Bruchophagus gibbus) - WISCONSIN - Incidence of infested seeds in red clover seed samples being received by State Seed Laboratory greater than in 1957. Samples from southern Clark County have highest infestations which range up to 8 percent. (Wis. Coop. Sur.).

SPOTTED ALFALFA APHID (Therioaphis maculata) - OKLAHOMA - Counts at seven-day intervals show slight increase over past 3 weeks in Payne County. (Bieberdorf). Averaged 10-17.5 per sweep in alfalfa fields in the Davidson area of Tillman County and 300-400 per linear foot in a field of young alfalfa in the same area. (Hatfield). KANSAS - Damaged fall-planted alfalfa in Saline County, November 15. (Harvey). OREGON - Remains active in Hermiston area of Umatilla County, November 24. (Bierman).

PEA APHID (Macrosiphum pisi) - ARKANSAS - Averaged 4-8 per 25 sweeps in alfalfa in Jackson County. (Ark. Ins. Rpt.).

THREE-CORNERED ALFALFA HOPPER (Spissistilus festinus) - ARKANSAS - Averaged 6-7 per 25 sweeps in alfalfa in Jackson County. (Ark. Ins. Rpt.). OKLAHOMA - Averaged 0.1-0.4 per sweep in alfalfa fields in Davidson area, Tillman County. (Hatfield).

FRUIT INSECTS

HICKORY SHUCKWORM (Laspeyresia caryana) - OKLAHOMA - Shucks of approximately 90 percent of pecans in Stillwater area infested with 1-4 larvae. (Bieberdorf).

NAVEL ORANGEWORM (Paramyelois transitella) - CALIFORNIA - Light to medium on walnuts in Kelseyville, Lake County. (Cal. Coop. Rpt.).

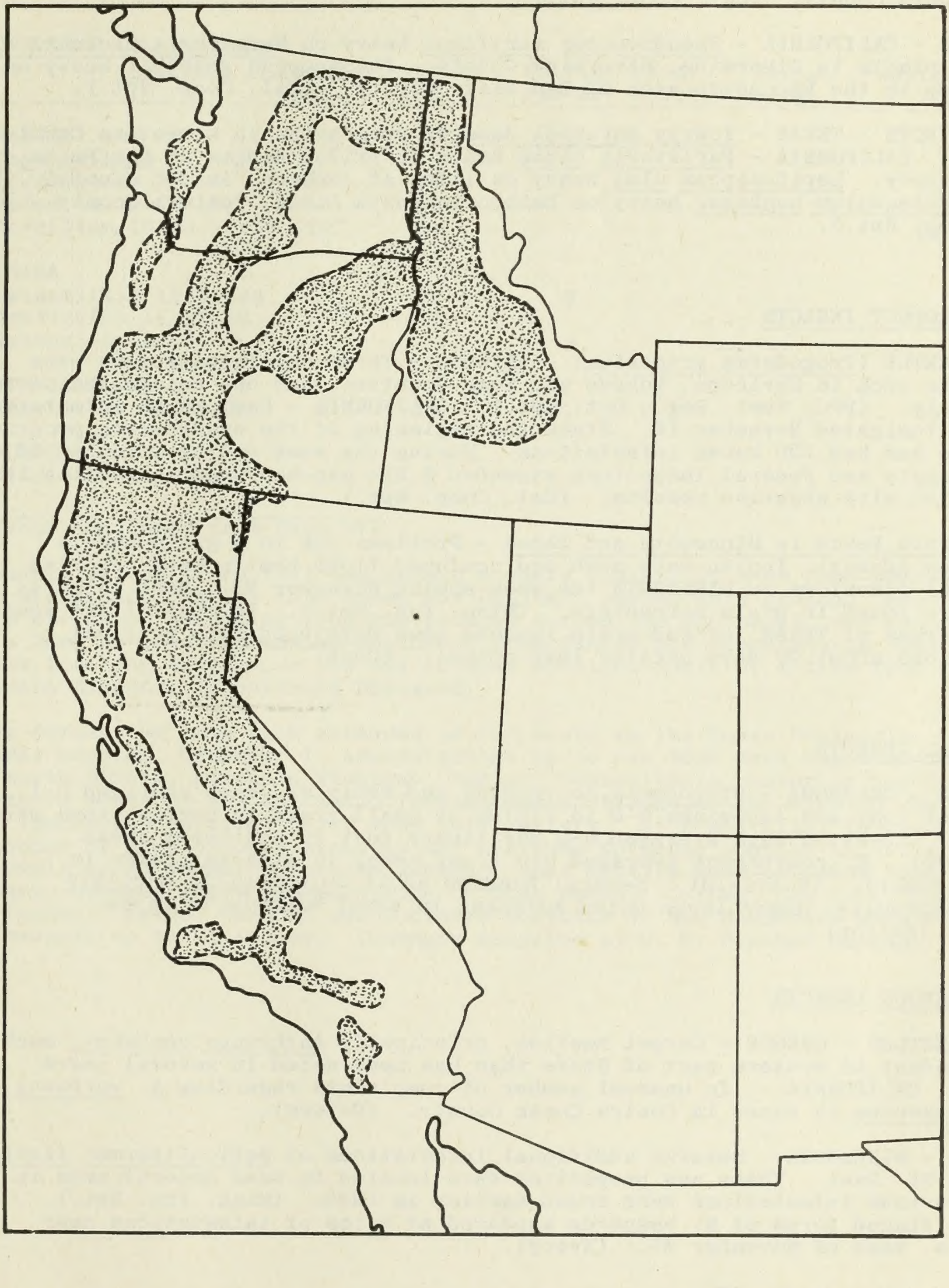
A WHITEFLY (Pealius kelloggi) - CALIFORNIA - Heavy on Prunus ilicifolia at Moorpark, Ventura County. (Cal. Coop. Rpt.).

COTTON INSECTS

PINK BOLLWORM (Pectinophora gossypiella) - ARIZONA - Field inspections disclosed a more extensive infestation in the south central part of the State than was expected. Since the original find in early July in the Gila River Valley of southwestern Maricopa County, the infestation has moved north and eastward across the county and southeastward into Pinal County. New finds were made in eastern Maricopa County and western Pinal County, which were, at the time, outside the quarantined area. The Arizona Commission of Agriculture and Horticulture extended the quarantine to include the entire cotton-producing portions of the State, except Yuma and Mohave Counties. Cochise, Graham, Greenlee, Maricopa, Pima, Pinal, Santa Cruz and Yavapai Counties are now under quarantine. (PPC). CALIFORNIA - During week ending November 28, six gin trash machines processed 5,263 bushels of trash in the San Joaquin Valley and southeastern desert areas from 55 gins, and 234 gin visits were made in inspection of 915 linit cleaners. All results were negative. (Cal. Coop. Rpt.).

A LEAF ROLLER (Platynota stultana) - CALIFORNIA - Light on cotton at Heber, Imperial County. Some attacking green bolls. (Cal. Coop. Rpt.).

DISTRIBUTION OF CALIFORNIA FLATHEAD BORER (Melanophila californica) in Western North America



Forest Pest Leaflet 24, June 1958

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

A BARK BEETLE (Pityophthorus serratus) - CALIFORNIA - Medium on pines at Alamo, Contra Costa County. (Cal. Coop. Rpt.).

MEALYBUGS - CALIFORNIA - Pseudococcus maritimus heavy on Mammilaria uncinata (cactus) plants in Riverside, Riverside County. Phenacoccus gossypii heavy on nightshade in the Escondido area of San Diego County. (Cal. Coop. Rpt.).

SCALE INSECTS - TEXAS - Icerya purchasi damaged pyracantha in Limestone County (Garner). CALIFORNIA - Parlatoria oleae heavy on privet hedges at Dos Palos, Merced County. Lepidosaphes ulmi heavy on lilac at Jackson, Amador County, and Asterolecanium bambusae heavy on bamboo in Santa Paula, Ventura County. (Cal. Coop. Rpt.).

STORED-PRODUCT INSECTS

KHAPRA BEETLE (Trogoderma granarium) - ARIZONA - Three new infestations were found, one each in Maricopa, Mohave and Yuma Counties, and one reinfestation in Yuma County. (PPC, West. Reg., Oct. Rpt.). CALIFORNIA - Last known infestation in State fumigated November 16. Since the beginning of the eradication program the State has had 330 known infestations. During the week ending November 28, State, County and Federal inspectors expended 1,214 man-hours of inspection in 10 counties with negative results. (Cal. Coop. Rpt.).

Stored-grain Pests in Minnesota and Texas - Problems due to a grain beetle (Ahasverus advena), Indian-meal moth and confused flour beetle were reported in several elevators in MINNESOTA the week ending November 24. Most infestations were found in grain screenings. (Minn. Ins. Rpt.). In central and south central areas of TEXAS, stored-grain insects have developed into critical infestations about 30 days earlier than normal. (Cook).

BENEFICIAL INSECTS

PREDATORS - OKLAHOMA - Hippodamia convergens and Nabis sp. each averaged 0-1 per linear foot and lacewings 0-2 in fields of small grain in northwestern part of State. Lacewing eggs averaged 0-2 per linear foot in scattered areas. (VanCleave). H. convergens averaged 0-0.1 per sweep in alfalfa fields in Tillman County. (Hatfield). Several hundred adult Coleomegilla maculata found congregated under large board adjacent to wheat stubble in Payne County. (Walton).

MISCELLANEOUS INSECTS

CARPET BEETLES - OREGON - Carpet beetles, principally Anthrenus verbasci, much more abundant in western part of State than has been noted in several years. (Every). CALIFORNIA - An unusual number of complaints regarding A. verbasci and A. museorum in homes in Contra Costa County. (Peters).

TERMITES - MINNESOTA - Several additional infestations of Reticulitermes flavipes found in St. Paul. These new properties were located in same general area in which previous infestations were found earlier in 1958. (Minn. Ins. Rpt.). OREGON - Winged forms of R. hesperus appeared at sites of infestations near Corvallis, week of November 23. (Every).

BROWN-BANDED ROACH (Supella supellectilium) - CALIFORNIA - Reported in 2 apartments in Oakland, Alameda County. (Peters).

LIGHT TRAP COLLECTIONS

	Pseud. unip.	Agrot. yps.	Feltia subter.	Prod. ornith.	Perid. marg.	Heliothis zea
ARKANSAS						
Fayetteville 10/30-11/19	34	19				38
Kelso 10/30-11/19	10	21			1	78
Morrilton 10/30-11/19	16	26				29
FLORIDA						
Gainesville 11/18-24		1	3			
Monticello 11/12-18		2				
Quincy 11/11-17			3			
SOUTH CAROLINA						
Charleston 11/24-30	9	26	41	1	1	1
WISCONSIN						
Middleton 11/22-28	1	2			1	12

Weather continued from Page 978

remnants of the storm that had spread a heavy blanket of snow from portions of the Mississippi Valley into upper New England, pushed into Canada. Sunday, the cold air mass, extending from the Rockies across the Southeast, was reinforced by a dome of cold air moving southward from Canada and temperatures remained below freezing throughout the day in most sections north of a line from southwestern Missouri to northern Delaware.

Snow during the past week extended as far south as the Texas Panhandle. On Monday morning, December 1, accumulations up to one foot were reported in parts of North Dakota, northern Michigan, western Pennsylvania, interior New York and northern areas of New England. In portions of Illinois, the snow on the 30th was the second earliest heavy snow this century. At Evansville, Indiana, 7 inches or more of snow exceeded any previous November monthly or daily total snowfall in 62 years. Over the weekend, snow squalls east of Lakes Erie and Ontario brought heavy accumulations to some areas. Colden, New York, reported 21 inches. Maine, Vermont and northern portions of New Hampshire were blanketed by amounts up to 11 inches. (Summary supplied by U. S. Weather Bureau).

NEW MEXICO

Prepared by Gerald Nielsen, et al.

Highlights: There was a general increase in GRASSHOPPER populations over 1957 on rangeland in all eastern counties, reaching threatening proportions only in a few areas. Cropland infestations in the irrigated area along the Rio Grande in Valencia, Bernalillo and Sandoval Counties also increased. Third-crop alfalfa was severely damaged in Bernalillo and Sandoval Counties. Voluntary programs in these three counties reduced crop losses to corn, vegetables and fruit trees. Two thousand acres of alfalfa were treated on the Isleta Indian Pueblo lands. During the summer, large flights of Trimerotropis pallidipennis settled on communities throughout the State and destroyed about 200 acres of tomato plantings in Luna County. Carrot beds were also severely damaged. Many farmers replanted 2 or 3 times. One intensive cooperative control program on rangeland was carried out in Union County where 148,249 acres were sprayed at the cost of $68,802 or an average cost of about 46.5 cents per acre. The 1958 adult grasshopper survey shows that there are threatening to severe infestations on 23,200 acres of cropland. In addition, 830,820 acres of rangeland were found infested in fifteen counties. BEET LEAFHOPPER and wild host plants were more plentiful in cultivated and rangeland areas than in the past five years. Western yellow blight destroyed tomato stands in Hidalgo, Luna and Lea Counties. The virus killed an estimated 25-40 percent of plants in tomato fields at Deming. SPOTTED ALFALFA APHIDS parasitized by Praon pallitans were collected early in April. This was the first record of this parasite overwintering in New Mexico. Praon pallitans became well established in alfalfa fields in Mesilla Valley and has dispersed to 20 other counties from the two original release sites in Dona Ana and Roosevelt Counties.

Heavy STINK BUG populations in Quay, Curry, Roosevelt and Lea Counties did considerable damage to small grains. FALSE CHINCH BUGS became extremely numerous in grain sorghum fields in August and September causing severe losses in Quay, Curry, Roosevelt and Luna Counties. INSECTS were a major factor in the reduction in yields of tomato fields in Luna and Lea Counties from an average of 16 tons to about 4 tons per acre this season. Late infestations of PINK BOLLWORM in southern Dona Ana County caused heavy damage to green bolls on about 300 acres and was moderately heavy on 700 additional acres.

Cereal and Forage Insects: SPOTTED ALFALFA APHID (Therioaphis maculata) infestations appeared to be lighter than in past seasons, except for the first two cuttings in Chaves, Dona Ana and Eddy Counties. Several fields of seedling alfalfa were killed in Chaves, Eddy and Lea Counties. There was an early spring and an early fall buildup in several other counties, but little control was needed. Spring and fall buildups of PEA APHID (Macrosiphum pisi) caused minor damage to established stands of alfalfa. Some fields of seedling alfalfa were damaged in Dona Ana, Chaves and Eddy Counties. THREE-CORNERED ALFALFA HOPPER (Spissistilus festinus) was very common in southern alfalfa fields, often averaged over one per sweep during the spring and 2-3 per sweep during late summer and fall. No severe infestations of ALFALFA CATERPILLAR (Colias philodice eurytheme) were found this season.

Heavy rains appeared to have reduced populations considerably in many areas during late summer. Spotty and light infestations of PALE WESTERN CUTWORM (Agrotis orthogonia) and ARMY CUTWORM (Chorizagrotis auxiliaris) were found on volunteer wheat in Curry County. CORN EARWORM (Heliothis zea) heavily damaged early plantings of corn and later plantings averaged from 60-90 percent infested. Large populations of THRIPS (Frankliniella occidentalis and F. minuta) curled leaves of unsprayed, young alfalfa during May and June. Many growers treated for thrips along with treatment for aphids. FALL ARMYWORM (Laphygma frugiperda) was light on sorghum heads in Lea County the last week of August. LYGUS BUGS began to build up in alfalfa fields in eastern and southern areas during March. Counts were as high as 4-5 adults and 2-10 nymphs per sweep during May and June, and were a big factor in reducing alfalfa seed yields. WESTERN HARVESTER ANT (Pogonomyrmex occidentalis) was most destructive to rangeland in San Miguel, Union, Harding and Colfax Counties. BEET WEBWORM (Loxostege sticticalis) damaged young wheat fields in De Baca and Quay Counties during last two weeks of September. A MITE (Oligonychus stickneyi) was a serious pest of corn in all areas where it is grown for ensilage. SOUTHWESTERN CORN BORER (Zeadiatraea grandiosella) infestations in most corn fields in Quay, Curry. De Baca, Roosevelt and Luna Counties were 80-100 percent. Light in some sorghum fields. A FALSE CHINCH BUG (Nysius raphanus) was heavy and damaged grain sorghum in Luna and also in all southeastern counties. About 6000 acres were infested in Curry County alone. Losses were estimated at over 50 percent in several fields in Quay and Curry Counties. STINK BUGS caused little damage to wheat fields in Quay County and WHEAT HEAD ARMYWORM (Faronta diffusa) caused minor damage to wheat in Quay and Curry Counties. ALFALFA LOOPER (Autographa californica) was light in alfalfa near Raton. VARIEGATED CUTWORM (Peridroma margaritosa) was a minor problem in 1958. WHITE GRUBS were moderate to heavy. Winter wheat in the vicinity of Pleasant Hill, Curry County, during October was replanted in several fields. Heavy infestations of BLISTER BEETLES damaged alfalfa locally at Gila, Grant County. A SERPENTINE LEAF MINER damaged alfalfa foliage of first and second-cuttings in southern Eddy County. GREENBUG (Toxoptera graminum) was light and spotty in Curry and Quay Counties during February. Heaviest infestation found averaged about 2 per linear foot. CORN LEAF APHID (Rhopalosiphum maidis) severely damaged barley in southern Dona Ana County and moderate to heavy infestations damaged wheat and barley in Roosevelt, Chaves and Eddy Counties during the last week of May. ENGLISH GRAIN APHID (Macrosiphum granarium) was heavy and damaged wheat and barley which had not yet headed out in eastern counties during May.

Fruit Insects: CODLING MOTH (Carpocapsa pomonella) losses were high in most orchards of the State, ranging from about 2 percent "wormy" apples in treated orchards to almost 100 percent on unattended backyard trees. CLOVER MITE (Bryobia praetiosa complex) eggs were very numerous in untreated orchards during early spring and began hatching during first two weeks of April. Adults caused severe damage to apple and peach foliage in Lincoln, De Baca, Bernalillo, Sandoval, Rio Arriba, Otero and San Juan Counties during early summer. Tetranychus sp. was most serious in apple orchards in Rio Arriba, Sandoval and San Juan Counties. SHOT-HOLE BORER (Scolytus rugulosus) was very destructive in peach orchards in Lincoln, De Baca, Rio Arriba and San Juan Counties and killed cherry trees at Tesuque, Santa Fe County. APPLE GRAIN APHID (Rhopalosiphum fitchii) infested apple orchards in Espanola Valley during May. JUNE BEETLES were a problem on ripening peaches in southern counties. CAT-FACING INSECT damage seriously reduced quality of peaches in Rio Arriba County. Heavy oviposition injury by TREEHOPPERS was observed on apple trees at High Rolls, Otero County. PEAR-SLUG (Caliroa cerasi) defoliated cherry and choke cherry trees in Mora County. During first week of June ROSY APPLE APHID (Anuraphis roseus) was heavy in apple orchards in San Juan County, lighter in Rio Arriba, Sandoval and Santa Fe Counties. GREEN PEACH APHID (Myzus persicae) caused extreme curling of leaves on peach trees throughout the State. Where control measures were not taken, leaves and fruit usually dropped. A SCALE (prob. *Lecanium pruinosum*) became a very serious pest of pecans in Dona Ana County. A GRAPE LEAFHOPPER (*Erythroneura* sp.) was a serious problem in vineyards throughout the State where no control was used. RED-BANDED LEAF ROLLER (*Argyrotaenia velutinana*) damaged at least 1/3 of the apples at Albuquerque. Foliage was also severely damaged. A LEAF ROLLER (prob. *Archips argyrospila*) did extensive damage to foliage in apple orchards in Taos County. PEACH TWIG BORER (*Anarsia lineatella*) did extensive damage to terminal growth of peach trees in De Baca, Lincoln, Dona Ana, Eddy and Rio Arriba Counties. WOOLLY APPLE APHID (*Eriosoma lanigerum*) caused considerable damage to roots of apple trees in Hondo Valley during the spring. Light to heavy infestations were observed in apple orchards throughout the State. SAN JOSE SCALE (*Aspidiotus perniciosus*) was heavy in orchards in Bernalillo, Santa Fe, Sandoval, Rio Arriba and San Juan Counties. Lighter infestations were found in all fruit growing areas. FALL WEBWORM (*Hyphantria cunea*) defoliated pear and apple trees in Rio Arriba and Taos Counties. Several infestations damaged foliage on pecan trees in Dona Ana County. A PLUM APHID (*Anuraphis helichrysi*) severely damaged foliage of plum trees in De Baca and Bernalillo Counties.

Truck Crop Insects: CABBAGE LOOPER (*Trichoplusia ni*) was serious on lettuce again this season, requiring control at regular intervals. They were especially destructive on young fall lettuce in Mesilla Valley where the cost of control averaged about $35.00 per acre. TOMATO HORNWORM (*Protoparce quinquemaculata*) was a problem on tomatoes and chili in gardens and fields where adequate control measures were not used. CORN EARWORM or TOMATO FRUITWORM (*Heliothis zea*) was of minor importance in most tomato fields because of adequate spray program until late in the season when rain and harvesting prevented control. Most garden corn was 100% infested. During September larvae caused light to heavy damage to lettuce fields in Dona Ana County. Several fields were 20-40 percent damaged. BEET LEAFHOPPER (*Circulifer tenellus*) populations were above normal. Curly top did extensive damage to tomatoes in Luna, Valencia, Bernalillo and Lea Counties. GRASSHOPPERS were destructive to crops in Valencia, Rio Arriba, Bernalillo and Luna Counties. POTATO PSYLLID (*Paratrioza cockerelli*) - Extensive damage was caused by psyllid yellows in potato fields in San Juan County. Very little trouble was encountered in Estancia Valley because of adequate control methods. COLORADO POTATO BEETLE (*Leptinotarsa decemlineata*) was light on potatoes in Curry County during first week of June. STINK BUGS severely damaged cabbage fields in Lea County during July and caused considerable damage to home gardens. CABBAGE APHID (*Brevicoryne brassicae*) damaged cabbage in Luna and Lea Counties during July. SQUASH BUG (*Anasa tristis*) was most serious on cantaloupes in Valencia, Socorro and Hidalgo Counties. A SPOTTED CUCUMBER BEETLE (*Diabrotica undecimpunctata tenella*) and STRIPED CUCUMBER BEETLE (*Acalymma vittata*) were heavy on melons necessitating the replanting of some fields in Valencia County. Damage also occurred on melons and cucurbits in De Baca, Hidalgo, Bernalillo and Rio Arriba Counties. TORTOISE BEETLE (*Metriona bicolor*) damaged chili at Redrock, Grant County. ONION THRIPS (*Thrips tabaci*) was light to heavy on fall and spring onions, depending on control used. HARLEQUIN BUG (*Murgantia histrionica*) was heavy and damaged gardens in Mora County and was serious on cabbage in Lea County. MEXICAN BEAN BEETLE (*Epilachna varivestis*) was heavy on beans in Mora and Estancia Valleys causing severe damage where adequate controls were not used.

Cotton Insects: BOLLWORM (*Heliothis zea*) was controlled in most areas. Several severe infestations, however, damaged cotton in the Animas Valley and Deming area. Portions of these fields had as high as 60 percent of the bolls damaged. LYGUS BUGS (*Lygus* spp.) were considered as the most destructive pest of cotton this season. During early season, light to heavy infestations damaged squares and young bolls in all cotton growing areas. MITES were a minor problem in most areas. Late season infestations were generally light and spotty.

COTTON LEAFWORM (*Alabama argillacea*) was light and spotty in cotton fields this season. CABBAGE LOOPER (*Trichoplusia ni*) larvae were a problem throughout entire season in cotton fields, until late summer when large numbers of the larvae were attacked by a fungus and various species of predators. GRASSHOPPERS reduced cotton stands along fence rows and borders of fields in Hidalgo, Roosevelt, Luna and Lea Counties. ONION THRIPS (*Thrips tabaci*) was heavy, severely damaging seedling cotton plants in southern counties. Some growers were of the opinion that they caused loss of "bottom crop". COTTON FLEAHOPPER (*Psallus seriatus*) damage appeared to be lighter in most fields than in previous years. Only occasional specimens of COTTON SQUARE BORER (*Strymon melinus*) were collected from cotton fields in Dona Ana, Socorro, Eddy and Lea Counties. COTTON APHID (*Aphis gossypii*) was a problem in a few fields early in the season, but late season populations were generally heavy in many fields in southern counties. During May of 1958, COWPEA APHID (*Aphis medicaginis*) was only spotty and light to moderate in Eddy and Dona Ana Counties, while during the same period in 1957 it was generally heavy throughout the cotton growing area. No evidence of economic buildup of PINK BOLLWORM (*Pectinophora gossypiella*) was found in the State until the first of October when several heavy infestations of green bolls were found in about 300 acres and moderately heavy infestations on 700 additional acres in the southern part of Dona Ana County.

Forest, Ornamental and Shade Tree Insects: FALL WEBWORM (*Hyphantria cunea*) larvae were very abundant on poplar and elm trees throughout the State and especially numerous on cottonwood trees along Rio Grande River. A LEAFHOPPER (*Empoasca bipunctata*) - Heavy infestations stippled leaves of elm trees throughout the State. A MITE (*Oligonychus coniferarum*) damaged juniper in Bernalillo and Dona Ana Counties. A BUD MITE (*Aceria paradianthi*) was collected on carnations in a greenhouse at Albuquerque, the first record for the State. AN APHID (*Cinara tujafilina*) was heavy throughout the State on arborvitae. POPLAR TWIG GALL APHID (*Pemphigus populi-ramulorum*) galls were very numerous on poplar trees at Hatch. NITIDULIDS (*Carpophilus* spp.) caused considerable damage to roses throughout the State. BOXELDER LEAF ROLLER (*Gracilaria negundella*) denuded boxelder trees in Santa Fe and Rio Arriba Counties during June. MOURNING-CLOAK BUTTERFLY (*Nymphalis antiopa*) larvae defoliated elm trees at Willard and Estancia, Torrance County, and Las Vegas, San Miguel County. SMALLER EUROPEAN ELM BARK BEETLE (*Scolytus multistriatus*) infested American elm trees at Albuquerque. A TUSSOCK MOTH (*Hemerocampa* sp.) was moderate on 12,000 acres in the Sandia Mountains. Egg masses were moderate to heavy. A new outbreak of FIR ENGRAVER BEETLE (*Scolytus ventralis*) was found in Lincoln National Forest and was heavy on 5,000 acres of white fir. *S. ventralis* also caused considerable damage to white fir on Sandia Mountains. The association of *Ips* spp. and *Dendroctonus* spp. decreased from 1957 when there were about one million acres damaged compared with about 200,000 acres in 1958. Damage by DOUGLAS-FIR BEETLE (*Dendroctonus pseudotsugae*) decreased from 700,000 acres in 1957 to 500,000 in 1958. SPRUCE BUDWORM (*Choristoneura fumiferana*) increased the number of acres partially defoliated in northern New Mexico from 80,000 acres in 1957 to 220,000 acres in 1958. An ASPEN LEAF ROLLER (probably *Archips conflictana*) was active in aspen in Carson National Forest. GREAT BASIN TENT CATERPILLAR (*Malacosoma fragilis*) defoliated acreage was about the same as in 1957, or about 190,000 acres. A NEEDLE MINER (*Recurvaria* sp.) has almost disappeared in ponderosa pine in Carson National Forest.

Insects Affecting Man and Animals: HORN FLY (*Siphona irritans*) was troublesome to cattle and horses throughout the season. MOSQUITOES were much more annoying in 1958 in cities along the Rio Grande because of above normal precipitation. SPINOSE EAR TICK (*Otobius megnini*) was moderately heavy on cattle in Dona Ana and Luna Counties. CATTLE LICE were prevalent on cattle during winter and spring. CATTLE GRUBS (*Hypoderma* spp.) began attacking cattle in Luna and Sierra Counties the latter part of February. Ranchers throughout the State had trouble with larvae of a SCREW-WORM (Callitroga sp.) getting into wounds on cattle and horses and were treating cattle during the latter part of October in southern counties. SARCOPTIC MANGE MITE (Sarcoptes scabiei var. suis) infested several swine herds in Hidalgo County and was fatal to weaner pigs when extremely heavy. SHEEP KED (Melophagus ovinus) was quite abundant on sheep during shearing in De Baca, Torrance and Lincoln Counties.

Beneficial Insects: Praon palitans has become well established in alfalfa fields in Mesilla Valley and has dispersed to 20 other counties from the two original release sites in Roosevelt and Dona Ana Counties. GREEN LACEWING adults and larvae were very abundant in alfalfa and cotton fields throughout the cultivated areas of the State. DAMSEL BUGS (Nabis spp.) were very high in alfalfa fields all season. A BRACONID (Aphidius testaceipes) parasitized cotton aphid in Mesilla Valley cotton fields. Aphids were 70-90 percent parasitized in many fields with as many as 150-200 parasitized aphids per leaf. SYRPHID larvae were abundant in wheat fields infested with aphids at Cimmaron, Colfax County.

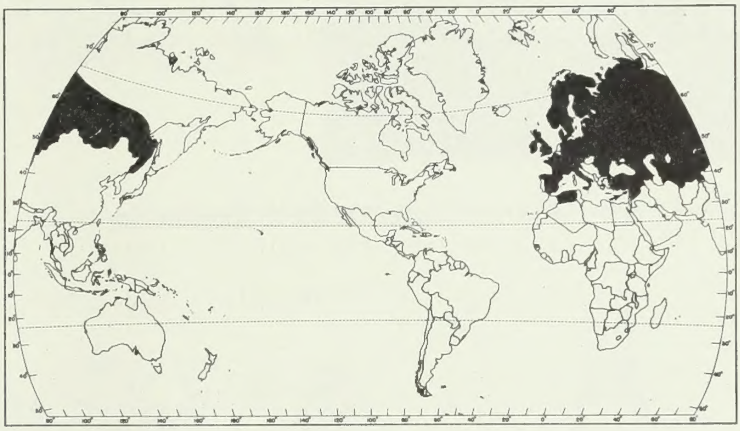
INSECTS NOT KNOWN TO OCCUR IN THE UNITED STATES

PLUM FRUIT MOTH* (Laspeyresia funebrana (Treitschke))

Economic Importance: Plum fruit moth or red plum maggot is a serious pest of plum in wide areas of Europe. Its damage has also been reported from Western Asia and North Africa. In some years as much as three-fourths of the plum crop has been lost to this insect in France. Over 60 percent of the prunes are infested annually in the Black Sea area of the Caucasus (USSR) where the moth is regarded as the most important pest of the crop. It is also one of the main pests of plums in Turkestan (USSR) and in the British Isles. Large consignments of plums were condemned at canneries in England in 1935 because of red plum maggot. Other stone fruits are also attacked but apparently plum is the preferred host.

Distribution: Temperate Europethrough Siberia (USSR), Asia Minor, North Africa.

Hosts: Plum, peach, cherry and other stone fruits. Also reported from apple and walnut.



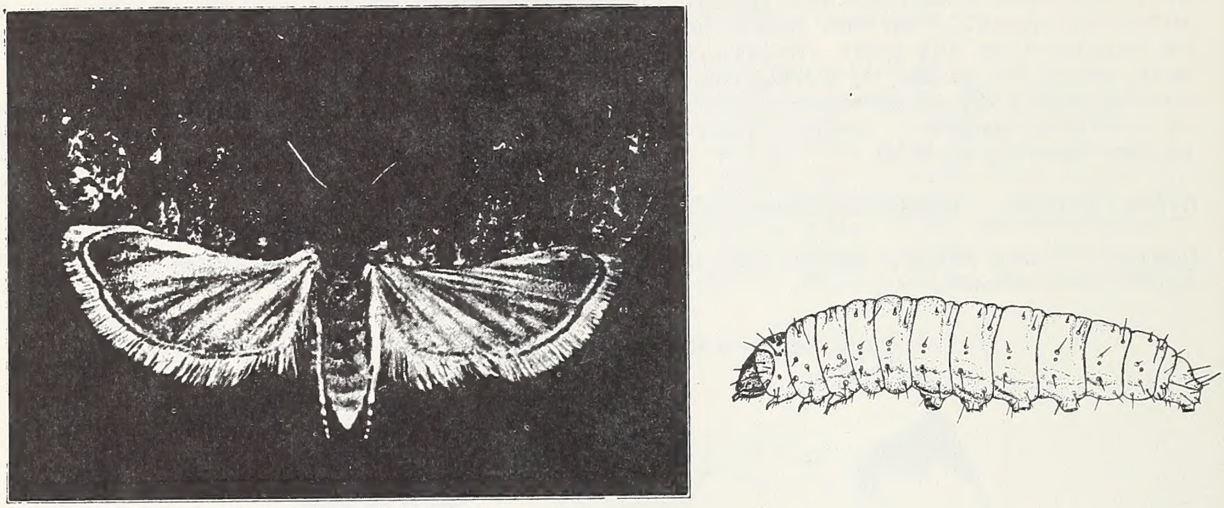
General Distribution of Plum Fruit Moth

Life History and Habits: The biology is not fully known. In France it has one, perhaps two, generations a year. The late appearing moths may represent an extended emergence period. The first adults appear about the end of June when plums are approaching maturity. Eggs are deposited at the base of the stalk of the fruit and hatch in about 10 days. The young larva bores into the tissues leaving a conspicuous entrance hole surrounded by frass. From the stem the larva migrates into the pulp of the fruit and tunnels around the stone leaving behind it rotting tissue mixed with excrement. By the end of August the larva is fully fed and bores out of the fruit. A gummy exudate often forms at the exit hole. The larva then seeks hibernation quarters such as cracks and crevices in the bark. There it spins a cocoon in which it pupates the following spring.

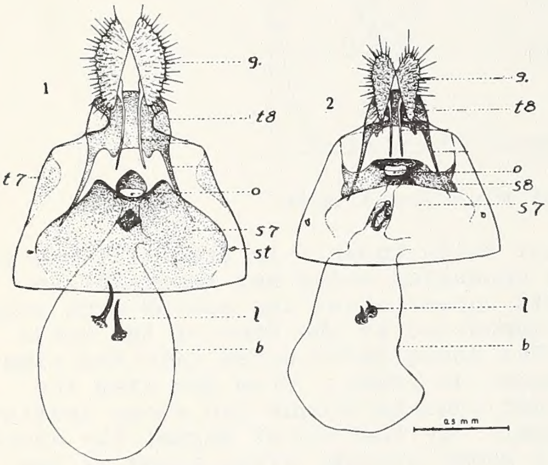
Description: The moth is smaller than the codling moth, having expanse of 10-14 mm. It is generally dark gray and has some external resemblance to oriental fruit moth. The hindwings are uniformily dark brown, a little more clear than the forewings. The insect is thickset; wings are rectangular,large, strongly truncate on extremities and have a poorly developed marginal fringe. The genitalia of L. funebrana differ from those of Carpocapsa pomonella as illustrated below. The larva attains a length of 10 mm. It is more slender than C. pomonella and the reddish color lighter, almost white, with the head and thoracic plate black. (Prepared in Plant Pest Survey Section in cooperation with other ARS agencies and the U. S. N. M.) CEIR 8 (49) 12-5-58

---

*Larva called red plum maggot and adults also known as plum tortricid (Tortricidae, Lepidoptera).

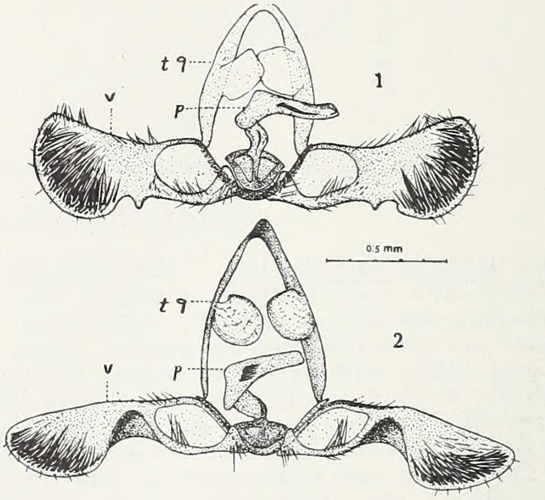


Adult and Larva of Laspeyresia funebrana



Female Genitalia of L. funebrana (1) and Grapholitha molesta (2)

g.- gonapophyses; t8,s8 - tergite & sternite of 8th abdominal segment t7,s7-tergite & sternite of 7th ababdominal segment; o - orifice of bursa copulatrix; b - bursa copulatrix; st - stigmata; l - laminae dentatae



Male Genitalia of L. funebrana (1) and Grapholitha molesta (2)

v - valves of forceps; p - copulatory organ; t9 - tergite of 9th abdominal segment.

Figures (except map) from Bovey, P. 1937. Rev. de Path. Veget. et d'Entomol. Agr. de France 24(3/4): 189-317.

UNITED STATES DEPARTMENT OF AGRICULTURE
WASHINGTON 25, D. C.

Official Business

Penalty for Private Use to Avoid
Payment of Postage, $300